

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 84-14
NPDES NO. CA0004871

WASTE DISCHARGE REQUIREMENTS FOR:

PACIFIC GAS AND ELECTRIC COMPANY
AVON POWER PLANT
AVON, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter Board) finds that:

1. Pacific Gas and Electric Company, Avon Power Plant (hereinafter discharger) was issued Regional Board Order No. 79-98, an NPDES Permit prescribing waste discharge requirements for the discharge for the Avon steam generating electric power plant. This permit, amended in Order No. 80-47, expired on December 31, 1981, but has remained in effect pursuant to Federal regulations pending the promulgation by the Federal Environmental Protection Agency of effluent limitation guidelines for steam electric power plants. These guidelines were published on November 19, 1982 in the Federal Register. The Discharger filed an Application received June 23, 1981 for re-issuance of the NPDES Permit, and has subsequently amended the Application.
2. The discharger presently discharges wastes containing pollutants, resulting from the generation of electric power into Suisun Bay a water of the United States. This discharge (Discharge 001) is combined with that of TOSCO refinery, for discharge through an offshore submerged outfall.

Discharge 002 is storm runoff from the fuel oil storage tank area. It is discharged into Pacheco Creek at a point about one half mile upstream of Waterfront Road. Discharge 002 is not treated.

3. The report of waste discharge describes the existing discharges as follows (see flow schematic in Attachment A):

<u>Discharge Outfall</u>	<u>Contributory Waste Stream</u>	<u>Annual Flow Average gpd</u>
001	Treatment System Discharge (Total)	315,000
	<u>Sources</u>	
	Zeolite Backwash Water	26,000
	Air preheater and fireside Washwater	4,400
	Boiler Blowdown	500
	Evaporator Blowdown	77,000
	Auxillary Cooling Water	6,500

<u>Discharge Outfall</u>	<u>Contributory Waste Stream</u>	<u>Annual Flow Average gpd</u>
	Main Unit	
	Cooling Tower Blowdown	200,000
002	Stormwater runoff from fuel oil storage tank area	100

4. The Regional Board adopted a revised Water Quality Control Plan, San Francisco Bay Basin (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for Suisun Bay.
5. The beneficial uses of Suisun Bay and contiguous waters are:
 - a. Recreation
 - b. Fish migration, spawning and habitat
 - c. Habitat and resting for waterfowl and migratory birds
 - d. Industrial water supply
 - e. Esthetic enjoyment
 - f. Navigation
 - g. Preservation of Rare and Endangered Species
6. Effluent limitations established pursuant to Sections 301, 304, and 307 of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.
7. The Board finds that the Best Practicable Control Technology currently available (BPT) effluent limitations which the U.S. Environmental Protection Agency has promulgated to regulate conventional pollutants for the steam-electric power generating point source category are equivalent to Best Conventional Pollutant Control Technology (BCT) for the Avon Power Plant of Pacific Gas and Electric Company.
8. The action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000 et seq.), in accordance with Section 13389 of the California Water Code.
9. The CWA requires compliance with State water quality standards for the discharge of thermal effluent. The State Water Resources Control Board (State Board), on 18 September 1975, amended the Water Quality Control Plan for Control of Temperature in the Coastal Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan). The Thermal Plan requires that for existing thermal waste, discharges shall comply with limitations necessary to assure protection of beneficial uses.
10. The temperature of Discharge 001 has an average value of 80.2 °F (26.8°C).
11. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

12. The Board, in a public meeting, heard and considered all comments pertaining to the discharge permit.

IT IS HEREBY ORDERED, that Pacific Gas and Electric Company, Avon Power Plant, in order to meet the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to meet the provision of the Federal Water Pollution Control Act as amended, and regulations and guidelines adopted thereunder, shall comply with the following:

A. Prohibitions

1. The discharge of polychlorinated biphenyl compounds is prohibited.

B. Effluent Limitations

1. Discharge 001 shall not contain constituents in excess of the following limits:

- a. Chlorine residual 0.0 mg/l, instantaneous maximum
- b. pH 6.0 - 9.0
- c. In any representative set of samples the waste as discharged shall meet the following limit of quality:

The survival of test fishes in 96-hour bioassays of the effluent shall be a 90 percentile value of not less than 50 percent survival.

- d. Thermal discharge limitation; Elevated temperature waste discharges shall be within limits necessary to assure protection of beneficial uses, and shall not exceed 20°F increase from ambient temperatures in the receiving water. The discharge either from the plant or after dilution with TOSCO, prior to discharge shall not exceed 96°F.

<u>Constituents</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Maximum Daily</u>
e. Total Suspended Solids	mg/l	30	100
f. Oil and Grease	mg/l	10	20

2. The quantity of pollutants discharged shall not exceed the quantity calculated from the flow of the waste sources times the concentration in mg/l in B.1. above.
3. Main Unit Cooling Tower Blowdown shall not contain constituents in excess of the following limits:

<u>Constituents</u>	<u>Unit</u>	<u>30-Day Average</u>	<u>Maximum Daily</u>
a. The 126 priority pollutants added for cooling tower maintenance except:	mg/l	No detectable amount	No detectable amount
b. Chromium, total	mg/l	0.2	0.2
c. Zinc, total	mg/l	1.0	1.0

5. Discharge 002 (stormwater runoff) shall not exceed the following:

<u>Constituents</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Maximum Daily</u>
Oil and Grease	mg/l	10	20

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of turbidity or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended or deposited oil or other products of petroleum origin, and
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in water of the State at any place within one foot of the water surface:

- a. Dissolved oxygen 7.0 mg/l minimum -- median for any three consecutive months not less than 80% saturation. When natural factors cause lesser concentration than specified above, then discharge shall not cause further reduction in the concentration of dissolved oxygen.
- b. pH Variation from natural ambient pH by more than 0.5 pH units

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such standards.

D. Provisions

1. Neither the discharge nor its treatment shall create a nuisance or pollution as defined in Section 13050 of the California Water Code.
2. The Discharger shall comply with a Self-Monitoring Program as adopted by the Regional Board, and as may be amended by the Executive Officer.
3. The requirements prescribed herein do not authorize the commission of any act causing injury to property of another, nor protect the Discharger from his liabilities under federal, state or local laws, nor guarantee the discharger a capacity right in the receiving waters.
4. In the event of any change in control or ownership of land or waste, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this office.
5. The Discharger shall permit the Regional Board:
 - (a) Entry upon premises where an effluent source is located or in which any required records are kept;

- (b) Access at reasonable times to copy any records required to be kept under terms and conditions of this Order;
 - (c) Sampling at reasonable times of any discharge.
- 6. The Discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Discharger to achieve compliance with the waste discharge requirements.
- 7. After notice and opportunity for a hearing, this Order may be modified, suspended, or revoked, in whole or in part, during its term for cause including, but not limited to, the following:
 - (a) Violation of any terms or conditions of this Order;
 - (b) Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts;
 - (c) A temporary or permanent reduction or elimination of the authorized discharge; or,
 - (d) A change in character, location or volume of discharge.
- 8. This permit shall be modified or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(c), and (D), 303, 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or,
 - (b) Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.
- 9. All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection Agency regulations (40 CFR 122.41K).
- 10. Pursuant to Environmental Protection Agency regulations [40 CFR 122.42(a)] the Discharger must notify the Regional Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture of a pollutant not reported in the permit application, or (2) a discharge of a toxic pollutants not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits.
- 11. Order No. 79-98 is hereby rescinded.

12. This Order expires on April 18, 1988 and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.
13. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall take effect at the end of 10 days from date of adoption provided the Regional Administrator, Environmental Protection Agency, has no objections.

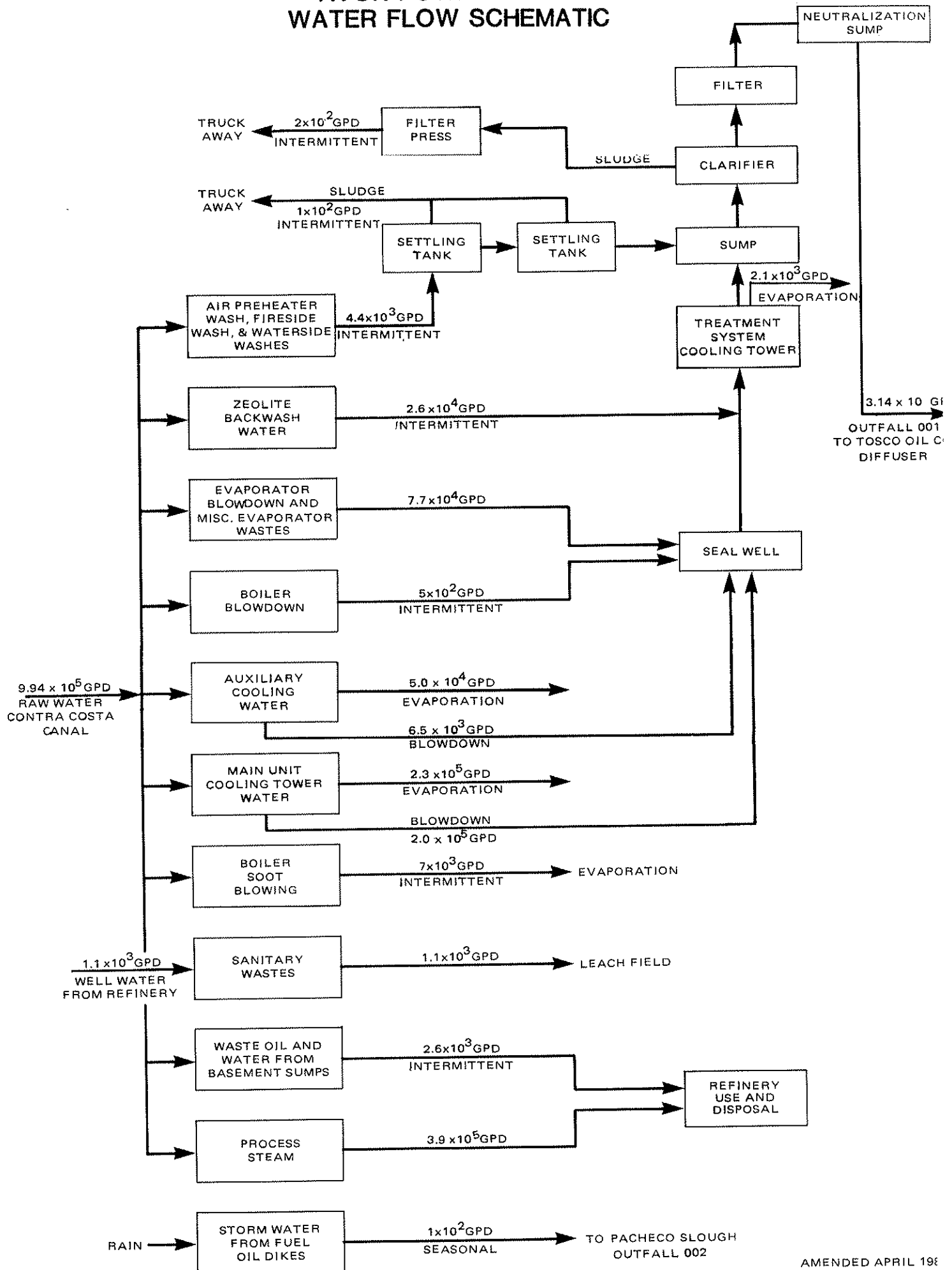
I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 18, 1984.

ROGER B. JAMES
Executive Officer

Attachments:

A - Flow Schematic
SMP

AVON POWER PLANT WATER FLOW SCHEMATIC



PART B

DESCRIPTION OF SAMPLING STATIONS AND SCHEDULE OF SAMPLING ANALYSIS AND OBSERVATIONS

I. Sampling Station Location/Description

B. Effluent

<u>Station</u>	<u>Description</u>
E-001-1	At any point in the treatment plant discharge at which all tributary pollutants are present and prior to mixing with TOSCO effluent leading to their offshore submerged outfall.
E-001-2	At any point in the main cooling tower discharge prior to combining with the other wastes.
E-002	At any point in the stormwater runoff at which all tributary pollutants are present, and prior to discharge to Pacheco Creek.
E-003	At any point in the combined discharge with TOSCO prior to discharge through the off-shore submerged outfall.

II. EFFLUENT MONITORING

The following shall constitute the effluent monitoring program:

<u>Station</u>	<u>Constituent</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Minimum Frequency of Analysis</u>
E-001-1	temperature	F	-	continuous
	flow	MGD	from pump operating data	daily
	pH	pH units	Grab	monthly
	chlorine	mg/l	Grab	daily, when treating
	Tot. Sus solids	mg/l	Grab	monthly
	Oil & Grease	mg/l	Grab	monthly
E-001-2	Flow	mgd	-	monthly

E-001-2	Chromium, zinc	mg/l	Grab	twice per week, when adding main- tenance chemicals
	Priority Pollutants Added	mg/l	Grab	annually, when adding maintenance chemicals
E-002	Oil & Grease	mg/l	Grab	each occurrence
E-003	Temperature	F	-	demonstration of temperature, daily, either by calcu- lation or measure- ment during cooling tower bypass (main- tenance or repair purposes only)

1/ Collect storm water samples during the first and second storms of each month, taking a minimum of 3 grab samples on the first day of the storm. The first grab shall be taken during the first hour of runoff, and the others at equal time intervals thereafter.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date